

## Contributors to this Issue

M. M. ATALLA, B.S., Cairo University, 1945; M.S., Purdue University, 1947; Ph.D., Purdue University, 1949; Studies at Purdue undertaken as the result of a scholarship from Cairo University for four years of graduate work. Bell Telephone Laboratories, 1950-. For the past three years he has been a member of the Switching Apparatus Development Department, in which he is supervising a group doing fundamental research work on contact physics and engineering. Current projects include fundamental studies of gas discharge phenomena between contacts, their mechanisms, and their physical effects on contact behavior; also fundamental studies of contact opens and resistance. He is a member of Sigma Xi, Sigma Pi Sigma, Pi Tau Sigma, the American Physical Society, and an associate member of the A.S.M.E.

WALTER H. BRATTAIN, B.S., Whitman College, 1924; M.A., University of Oregon, 1926; Ph.D., University of Minnesota, 1928. Radio section, Bureau of Standards, 1928-1929. Bell Telephone Laboratories, 1929-. Division of War Research, Columbia University, 1942-43. Visiting lecturer, Harvard University, Fall term of academic year 1952-53. Dr. Brattain, co-inventor with Dr. John Bardeen of the point-contact transistor, has been primarily concerned with the study of semi-conductors at the Laboratories. He has also studied frequency standards, thermionics, magnetometers and infrared. Doctor of Sciences, Portland University, 1952; Stuart Ballantine Medal of the Franklin Institute, 1952. Member of Sigma Xi and Phi Beta Kappa. Fellow of the American Physical Society, the American Association for Advancement of Science, and member of the Franklin Institute.

A. GARDNER FOX, B.S., Massachusetts Institute of Technology, 1934; M.S., Massachusetts Institute of Technology, 1935. Bell Telephone Laboratories, 1936-. Since 1944 Mr. Fox has been concerned with the design of microwave amplifiers and with research on millimeter waves at the Holmdel Radio Laboratory. From 1942 to 1944 he designed radio transmission filters and antennas for a fire-control radar system. Prior to this he did research on waveguides, development work on radar,

and designed mobile and airborne radio transmitters. He is currently in charge of a microwave physics group doing research in the millimeter wavelength range. Senior member of the I.R.E.

C. G. B. GARRETT, B.A., Cambridge University (Trinity College), 1946; M.A., Cambridge, 1950; Ph.D., Cambridge, 1950. Instructor in physics, Harvard University, 1950-52. Bell Telephone Laboratories, 1952-. Dr. Garrett has been engaged in research and exploratory development on semiconductor surfaces. Prior to coming to the Laboratories Dr. Garrett's chief work was in the field of low-temperature physics. He is the author of "Magnetic Cooling" (Harvard University Press, 1954). Senior Scholar of Trinity College, Cambridge, 1945; Twisden Student of Trinity College, 1949. Fellow of Physical Society (London).

FRANZ E. HOHN, B.S., McKendree College, 1936; M.S., University of Illinois, 1937; Ph.D., University of Illinois, 1940. Mr. Hohn is associate professor in the Departments of Electrical Engineering and Mathematics at the University of Illinois. He studied applications of mathematical theory to switching while he was a research guest at the Laboratories from June, 1953, to September, 1954. Ford Foundation faculty fellowship, 1951-52. Member of Sigma Xi, Pi Mu Epsilon, American Mathematical Society, Mathematical Association of America, American Council of Teachers of Mathematics and the American Association of University Professors.

STEWART E. MILLER, University of Wisconsin, 1936-39; B.S. and M.S., Massachusetts Institute of Technology, 1941. Bell Telephone Laboratories, 1941-. Since June 1954, Mr. Miller has been Assistant Director of Radio Research at Holmdel and has been in charge of research on guided-wave systems and associated millimeter and microwave techniques. During World War II, he worked on airborne radar systems. He also worked on coaxial carrier transmissions systems. Mr. Miller holds patents in connection with automatic frequency control, an oscillator control scheme and the D-C amplifier. Member of the I.R.E., Eta Kappa Nu, Tau Beta Pi and Sigma Xi.

L. ROBERT SCHISSLER, B.S. in E.E., Lehigh University, 1953; S.M. in E.E., Massachusetts Institute of Technology, 1954. Mr. Schissler, a graduate student in electrical engineering at Massachusetts Institute of Technology, was concerned with the practical realization of electronic

logic circuits while a Summer (1954) employee at the Laboratories. During the Summer of 1953 he studied the applications of matrix algebra to switching circuits at the Laboratories. Member of Phi Beta Kappa, Pi Mu Epsilon, Eta Kappa Nu and the I.R.E.

ARTHUR UHLIR, JR., B.S., M.S. in Ch.E., Illinois Institute of Technology, 1945, 1948; S.M. and Ph.D. in Physics, University of Chicago, 1950, 1952. Dr. Uhlir has been engaged in many phases of transistor development since joining the Laboratories in 1951, including electrochemical techniques and studies on semiconductors. Since 1952 he has participated in the Laboratories' Communications Development Training program, giving instruction in semiconductors. Member of Gamma Alpha, a graduate scientific fraternity, and president of its Chicago chapter in 1951; American Physical Society, Sigma Xi and the Institute of Radio Engineers.

MAX T. WEISS, B.S. in E.E., College of the City of New York, 1943; M.S. in E.E. and Ph.D. in Physics, Massachusetts Institute of Technology, 1947 and 1951. Mr. Weiss worked for the Radio Corporation of America in Camden, N. J. from 1943 to 1944 and then served in the U. S. Navy, working on underwater mines at the Naval Ordnance Laboratory. From 1946 to 1950 he was connected with the Research Laboratory of Electronics at the Massachusetts Institute of Technology. He joined Bell Telephone Laboratories in 1950 and for one year was concerned with research in dielectric waveguide transmission. Since then he has been chiefly concerned with research in microwave properties and applications of ferrites. Member of the Institute of Radio Engineers, the American Physical Society, Sigma Xi, and Eta Kappa Nu.